

# NATIONAL CANNERS ASSOCIATION



## Information Letter



FOR N. C. A. MEMBERS

No. 272

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### Hearing on Tax Regulations for Affiliated Corporations

The Revenue Act of 1928 imposes upon the Treasury the duty to prescribe regulations, for the taxable year 1929 and thereafter, for the filing of consolidated returns by affiliated corporations and the determination of the tax liability of, and the collection of the tax from, affiliated corporations filing consolidated returns.

To obtain the views and suggestions of persons familiar with consolidated return problems of the taxpayers, the Treasury Department will hold public hearings, beginning September 10, 1928, and continuing through September 15, 1928, or until the hearings may properly be closed. Written memoranda may be filed. Communications should be addressed directly to Assistant Secretary Bond, Treasury Department, Washington, D. C. Persons requesting a hearing will be advised as soon as possible of the date and hour assigned.

### Canning Crop Conditions

Sweet corn and tomatoes for canning, cabbage for kraut and cucumbers for pickles on August 15 were in less favorable condition than on August 1, according to a report of the Bureau of Agricultural Economics issued August 23.

For the country as a whole the condition of sweet corn declined from 84 per cent to 79 per cent; tomatoes, 80 per cent to 74

per cent; cabbage for kraut, 84 per cent to 76 per cent and cucumbers for pickles, 81 per cent to 74 per cent. The following table shows the condition of the crop, by states, on August 1 and 15, 1928, and August 15, 1927.

| State               | Sweet corn                   |                             |                              | Tomatoes                     |                             |                              |
|---------------------|------------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|
|                     | Aug. 15,<br>1928<br>Per cent | Aug. 1,<br>1928<br>Per cent | Aug. 15,<br>1927<br>Per cent | Aug. 15,<br>1928<br>Per cent | Aug. 1,<br>1928<br>Per cent | Aug. 15,<br>1927<br>Per cent |
| Maine .....         | 85                           | 83                          | 80                           | ..                           | ..                          | ..                           |
| New Hampshire ..... | 80                           | 80                          | ..                           | ..                           | ..                          | ..                           |
| Vermont .....       | 80                           | 82                          | 75                           | ..                           | ..                          | ..                           |
| New York .....      | 70                           | 77                          | 82                           | 79                           | 77                          | 80                           |
| New Jersey .....    | ..                           | ..                          | ..                           | 78                           | 80                          | 85                           |
| Pennsylvania .....  | 85                           | 75                          | 62                           | 67                           | 83                          | 82                           |
| Ohio .....          | 57                           | 71                          | 58                           | 69                           | 87                          | 74                           |
| Indiana .....       | 77                           | 84                          | 60                           | 76                           | 81                          | 76                           |
| Illinois .....      | 84                           | 87                          | 69                           | 73                           | 82                          | 60                           |
| Michigan .....      | 68                           | 73                          | 60                           | 85                           | 97                          | 80                           |
| Wisconsin .....     | 85                           | 80                          | 55                           | ..                           | ..                          | ..                           |
| Minnesota .....     | 90                           | 84                          | 61                           | ..                           | ..                          | ..                           |
| Iowa .....          | 97                           | 95                          | 67                           | 73                           | 88                          | 72                           |
| Missouri .....      | ..                           | ..                          | ..                           | 73                           | 79                          | 64                           |
| Nebraska .....      | 72                           | 94                          | 88                           | ..                           | ..                          | ..                           |
| Delaware .....      | 58                           | 70                          | 70                           | 70                           | 77                          | 81                           |
| Maryland .....      | 74                           | 84                          | 63                           | 68                           | 80                          | 78                           |
| Virginia .....      | ..                           | ..                          | ..                           | 68                           | 78                          | 74                           |
| Kentucky .....      | ..                           | ..                          | ..                           | 53                           | 52                          | 70                           |
| Tennessee .....     | ..                           | ..                          | ..                           | 55                           | 67                          | 74                           |
| Arkansas .....      | ..                           | ..                          | ..                           | 66                           | 69                          | 75                           |
| Colorado .....      | ..                           | ..                          | ..                           | 80                           | 75                          | 80                           |
| Utah .....          | ..                           | ..                          | ..                           | 80                           | 92                          | 82                           |
| California .....    | ..                           | ..                          | ..                           | 90                           | 91                          | 83                           |
| Other States .....  | 74                           | 95                          | 70                           | 77                           | 82                          | 76                           |
| U. S. average ...   | 79                           | 81                          | 65                           | 74                           | 80                          | 77                           |

| State              | Cabbage for kraut            |                             |                              | Cucumbers for pickles        |                             |                              |
|--------------------|------------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|
|                    | Aug. 15,<br>1928<br>Per cent | Aug. 1,<br>1928<br>Per cent | Aug. 15,<br>1927<br>Per cent | Aug. 15,<br>1928<br>Per cent | Aug. 1,<br>1928<br>Per cent | Aug. 15,<br>1927<br>Per cent |
| New York .....     | 69                           | 72                          | 90                           | 72                           | 78                          | 66                           |
| Ohio .....         | 74                           | 91                          | 85                           | 74                           | 88                          | 42                           |
| Indiana .....      | 92                           | 95                          | 70                           | 77                           | 86                          | 39                           |
| Illinois .....     | 90                           | 95                          | 82                           | 80                           | 80                          | 50                           |
| Michigan .....     | 78                           | 94                          | 86                           | 72                           | 78                          | 47                           |
| Wisconsin .....    | 82                           | 79                          | 87                           | 73                           | 84                          | 51                           |
| Minnesota .....    | 82                           | 89                          | 80                           | 72                           | 86                          | 61                           |
| Iowa .....         | ..                           | ..                          | ..                           | 88                           | 88                          | 70                           |
| Missouri .....     | ..                           | ..                          | ..                           | 75                           | 83                          | 70                           |
| Colorado .....     | ..                           | 90                          | 72                           | ..                           | 87                          | 63                           |
| Washington .....   | ..                           | 85                          | 95                           | 60                           | 75                          | 60                           |
| California .....   | ..                           | ..                          | ..                           | 80                           | 80                          | 75                           |
| Other States ..... | 81                           | 90                          | 75                           | 75                           | 77                          | 74                           |
| U. S. average ...  | 76                           | 84                          | 85                           | 74                           | 81                          | 55                           |

### Business Conditions

The dollar volume of business measured by check payments was greater during the week ending August 18 than in either the previous week or the same week of 1927, according to the weekly statement of the Department of Commerce. Steel-plant operations increased to the highest point in two months and were considerably higher than a year ago. Building contracts were also higher than in either the previous week or the corre-

sponding week of 1927. The wholesale price index advanced and again exceeded the corresponding week of last year.

Stock prices advanced over the previous week, continuing their increase over a year ago. Interest rates on time money continued their advance while call money rates declined slightly. Business failures declined from the previous week and were slightly higher than a year ago.

## CAR LOADINGS

| Period                        | Total     | Miscellaneous | Merchandise | Other   |
|-------------------------------|-----------|---------------|-------------|---------|
|                               |           |               | L.C.L.      |         |
| Week ended August 11 .....    | 1,044,442 | 468,452       | 256,921     | 379,068 |
| Preceding week .....          | 1,048,622 | 420,548       | 257,136     | 370,938 |
| Corresponding week, 1927 .... | 1,049,639 | 400,347       | 259,421     | 389,871 |
| Corresponding week, 1926 .... | 1,102,660 | 401,659       | 257,849     | 443,152 |

## Weather and Crops

The week ended August 21, as a whole, was warmer than normal in all sections of the country, except locally in the Southeast, the far Northwest, and along the Pacific coast, according to the Weather Bureau's weekly report.

Precipitation was again heavy in the interior of the south Atlantic area from southeastern Pennsylvania southwestward to Georgia and much of Alabama, with the weekly totals ranging from about 2 to more than 7 inches. There were also some locally heavy rains in the central and northern Mississippi Valley areas, especially in parts of Missouri, and more generally in Iowa, while substantial amounts were reported from a number of places in the western Lake region, and more locally in the Ohio Valley States. Elsewhere precipitation was generally light, with very little occurring west of the Rocky Mountains.

In much of the Southeastern area the heavy to excessive rains of the week, following like conditions during that preceding, did heavy damage to crops by flooding lowlands and washing soil, while much corn was blown down by high winds. These conditions, in general, extended from the extreme east Gulf coast northward to southeastern Pennsylvania and New Jersey. Conditions along the immediate coast, however, were not so unfavorable, while the excessive rains did not extend to a great distance inland; in fact, much of Tidewater Virginia remains droughty. In the Northeast warmth and sunshine were unusually favorable; in the Ohio Valley showers were helpful, though some parts are still dry and needing rain, especially much of Ohio. Droughty conditions continue also in the western portions of Oklahoma and Texas, but other parts of the Southwest had beneficial rains.

In the Northwest, and generally west of the Rocky Mountains, the warm, mostly fair, and sunny weather made ideal conditions for outside operations, and harvest and haying especially made rapid progress. Irrigated crops did well, but otherwise rain is still needed, especially in the Rocky Mountain districts and the far Northwest. Frost was reported from parts of Montana.

### Truck Crop Markets

Weakness of markets and the gap between early-summer and late-summer crops caused a temporary decrease in carlot shipments during the week ended August 18, according to the U. S. Market News Service. Combined movement of 28 leading products last week dropped further to 18,820 cars. Peaches, watermelons, cantaloupes, and tomatoes registered sharp decreases, while potatoes, grapes and pears were gaining. Peaches still held first place.

Apple shipments decreased to 565 cars, 200 from the West and the others from eastern and central States. Virginia became the leading State in the East, while California still led in the West.

The fresh prune crop in northwestern States was considerably reduced by hot weather and other unfavorable conditions. Prunes were beginning to move actively from southern Washington and northern Oregon. The supply of peaches in New York City and other large markets is much lighter than it has been, and possibly a further improvement of prices will result. Total shipments decreased last week to 3,465 cars, of which California originated about 1,100.

Pear forwardings were gaining rapidly and filled 1,930 cars during the week. California was credited with 1,000, Oregon 475, Washington 350, and Colorado 75 cars. With pear shipments already 9,000 cars, the season is 2,000 cars ahead of last year's corresponding record.

Production of domestic-type cabbage in nine late States is forecast at 294,100 tons, or 8,000 less than the 1927 total. The New York crop is reduced very sharply to about 100,000 tons, because of lighter plantings and much lighter yield per acre. Wisconsin, on the other hand, shows a great increase and may have 73,500 tons this year; much of this being grown for kraut. Ohio and Michigan each have indicated gains of 11,000 tons, or

50 per cent over last year. Most of the past week's 250 carloads originated in Virginia.

CARLOT SHIPMENTS

| Commodity              | Aug.<br>12-18<br>1928 | Aug.<br>5-11<br>1928 | Aug.<br>14-20<br>1927 | Total this<br>season to<br>Aug. 18 | Total last<br>season to<br>Aug. 20 | Total<br>last<br>season |
|------------------------|-----------------------|----------------------|-----------------------|------------------------------------|------------------------------------|-------------------------|
| Apples, total          | 564                   | 681                  | 726                   | 5,527                              | 4,135                              | 93,176                  |
| Eastern                | 361                   | 297                  | 521                   | 3,059                              | 3,044                              | 44,500                  |
| Western                | 203                   | 384                  | 199                   | 2,468                              | 1,091                              | 48,676                  |
| Cabbage                | 249                   | 218                  | 270                   | 18,347                             | 16,529                             | 39,035                  |
| Carrots                | 30                    | 49                   | (a)                   | 5,280                              | (a)                                | 5,546                   |
| Cherries               | 48                    | 57                   | 12                    | 2,642                              | 1,456                              | 1,460                   |
| Green peas             | 119                   | 140                  | 81                    | 4,254                              | 3,706                              | 4,149                   |
| Mixed deciduous fruits | 431                   | 451                  | 516                   | 3,745                              | 3,246                              | 5,407                   |
| Mixed vegetables       | 569                   | 673                  | 830                   | 23,784                             | 24,296                             | 35,045                  |
| Peaches                | 3,466                 | 4,639                | 3,369                 | 37,970                             | 28,034                             | 41,553                  |
| Pears                  | 1,930                 | 1,510                | 1,862                 | 9,009                              | 6,949                              | 18,713                  |
| Plums and prunes       | 287                   | 117                  | 282                   | 3,514                              | 2,874                              | 5,983                   |
| String beans           | 14                    | 21                   | 27                    | 5,945                              | 5,429                              | 6,481                   |
| Tomatoes               | 240                   | 418                  | 254                   | 22,078                             | 22,982                             | 32,612                  |

(a) Unavailable

Canned Food Exports in July

Exports of canned foods in July, as compared with the same month last year, showed decreases in canned meats, evaporated milk, peaches and pears, while there were increases in canned vegetables, condensed milk, salmon, sardines, apricots and pineapples. The following table gives the figures as compiled by the Department of Commerce:

|                          | July, 1927 |           | July, 1928 |           |
|--------------------------|------------|-----------|------------|-----------|
|                          | Pounds     | Value     | Pounds     | Value     |
| Canned meats, total      | 1,343,594  | \$502,193 | 976,720    | \$345,422 |
| Beef                     | 177,521    | 37,647    | 174,190    | 64,234    |
| Sausage                  | 198,204    | 55,349    | 134,752    | 35,314    |
| Canned vegetables, total | 6,490,673  | 655,512   | 6,878,794  | 695,012   |
| Condensed milk           | 2,715,779  | 414,291   | 3,011,493  | 443,864   |
| Evaporated milk          | 6,326,271  | 671,399   | 5,179,572  | 503,697   |
| Canned fruits, total     | 11,701,605 | 1,076,849 | 13,335,139 | 1,172,340 |
| Apricots                 | 2,296,619  | 193,618   | 2,342,966  | 201,170   |
| Peaches                  | 3,001,714  | 257,324   | 1,727,461  | 149,193   |
| Pears                    | 1,638,422  | 161,950   | 362,655    | 40,262    |
| Pineapples               | 2,983,000  | 299,697   | 6,445,121  | 524,848   |
| Salmon                   | 909,063    | 132,195   | 2,189,257  | 455,320   |
| Sardines                 | 1,865,804  | 163,238   | 4,050,116  | 343,966   |

California Asparagus, Pea and Spinach Packs

Statistics on the 1928 pack of asparagus, peas and spinach in California have been issued by the Cannery League. In the following table is given the pack for 1928, along with comparative figures for 1927:

| Product   | 1927<br>Cases | 1928<br>Cases |
|-----------|---------------|---------------|
| Asparagus | 2,189,570     | 2,337,950     |
| Peas      | 52,914        | 124,677       |
| Spinach   | 1,968,668     | 2,904,542     |

The spinach figures as above stated included the pack in Southern California reported by the Southern California Cannery Association.

### Corn Sugar Output in 1927

The output of corn sugar in 1927, according to a preliminary statement issued by the U. S. Census Bureau, was 904,830,-682 pounds valued at \$25,635,262. In 1925 the output was 580,-370,043 pounds valued at \$19,505,495. The 1927 production thus represents an increase over 1925 of nearly 60 per cent in volume and of over 31 per cent in value.

### Bids Asked on Canned Foods for Federal Prisons

The Superintendent of Prisons, Department of Justice, Washington, D. C., is asking for bids to be opened September 6, on canned tomatoes, corn, peas, string beans, spinach, catsup, and jelly. The articles are for delivery at Leavenworth, Atlanta, Chillicothe (Ohio), and Alderson (W. Va.). Awards will be made on sample.

### New Condensed Milk Regulations for Fiji Islands

The American consul reports that, effective May 4, 1928, new regulations have been issued by the acting government of Fiji prohibiting the importation of preserved milk if below specified standards. Unsweetened condensed milk must not contain less than 8.5 per cent of butter fat and sweetened condensed milk not less than 9.0 butter fat. Milk powder and dried milk, when mixed with water according to directions, must not contain less than 8.5 per cent of milk solids not fat and 3.2 per cent of butter fat.

### Complaint on Can Rates Dismissed

The rates on empty tin cans from Baltimore to Gardners and Biglerville, Pa., and Inwood, W. Va., are not unreasonable or unduly prejudicial, according to a recent decision by the Interstate Commerce Commission, which has ordered dismissed a complaint attacking these rates.

### Canned Food Exports During Past Fiscal Year

An analysis of the foodstuffs export trade of the United States for the 12 months ending June 30 has been made by the Foodstuffs Division of the Bureau of Foreign and Domestic Commerce. The following table from this analysis shows the com-

parative quantity of canned food exported during the years ended June 30, 1927, and 1928:

| Commodities                               | 1926-27    | 1927-28    | Increase<br>+ or<br>decrease<br>(—)<br>Per cent |
|---|------------|------------|---|
|   | Pounds     | Pounds     |   |
| <b>Fruits:</b>                            |            |            |   |
| Apples and apple sauce .....              | 12,000,000 | 12,000,000 | —   |
| Apricots .....                            | 35,896,000 | 29,013,000 | —19.3   |
| Cherries .....                            | 2,111,000  | 1,413,000  | —   |
| Plums .....                               | 3,474,000  | 2,443,000  | —29.7   |
| Peaches .....                             | 81,596,000 | 86,631,000 | +5.8  |
| Pears .....                               | 66,104,000 | 52,672,000 | —20.3   |
| Pineapples .....                          | 37,426,000 | 51,226,000 | +36.9   |
| Other canned fruits .....                 | 27,280,000 | 18,423,000 | —32.4   |
| Preserved fruits, jellies, and jams ..... | 2,019,000  | 2,409,000  | +19.3   |
| Other fruit preparations .....            | 31,309,000 | 27,531,000 | —12.1   |
| <b>Vegetables:</b>                        |            |            |   |
| Asparagus .....                           | 12,786,000 | 17,061,000 | +33.4   |
| Beans .....                               | 14,525,000 | 15,088,000 | +3.9  |
| Corn .....                                | 5,139,000  | 4,665,000  | —9.2  |
| Peas .....                                | 5,188,000  | 5,575,000  | +7.5  |
| Soups .....                               | 22,477,000 | 25,515,000 | +13.5   |
| Tomatoes .....                            | 7,503,000  | 6,725,000  | —10.4   |
| Ketchup and other tomato sauces .....     | 7,536,000  | 8,584,000  | +13.6   |
| Other sauces, relishes and pickles .....  | 5,722,000  | 6,420,000  | +12.0   |
| Other canned vegetables .....             | 7,625,000  | 10,504,000 | +37.8   |
| <b>Milk:</b>                              |            |            |   |
| Condensed .....                           | 35,799,000 | 36,376,000 | +1.6  |
| Evaporated .....                          | 73,143,000 | 71,968,000 | —1.6  |
| Powdered .....                            | 3,007,000  | 3,290,000  | +9.4  |
| Infants' food, malted milk, etc..         | 2,746,000  | 2,476,000  | —9.8  |

### Foreign Sardine Fisheries

*Spain.*—The American consul at Seville reports that as a result of the abundance of fish the sardine factories at Vigo were very busy during the period up to July 1 packing fish which cost, on the average, less than 30 pesetas per "cesta," yielding four cases of 100 four-ounce tins, or approximately 3 cents per pound. This has been a very favorable development for the local factories, which have accumulated large stocks of sardines for export under most favorable conditions.

An embargo imposed by the Cuban Government on the importation of substitute sardines known as "chicharrillo" and "espadin" has not yet been removed. The Cuban Government claims that the actual agreement between Cuba and Spain provided for only true sardines.

*Portugal.*—In the Setubal district of Portugal, the most important sardine center, no really good fishing has been experienced since the beginning of the year, according to the American consul at Lisbon. Usually the sardines for the best of the summer pack are caught in April and May. These are the so-called summer fish and are especially suitable for the better grades shipped to the United States. There was a small carry-over into this season on account of the poor fishing during the whole of 1927. Sardines shipped to the United States



in the period from November, 1927, to April, 1928, were only about half as large as the amounts shipped in the corresponding years of 1925-26 and 1926-27.

*Norway.*—The canning factories in the Stavanger district have been idle most of the June quarter, according to the American consul. The total quantities of brisling and mussa (small herring) delivered to the canners were said to be sufficient to keep the local canning factories operating about half time. Very small quantities of mackerel were packed, the canners stating that there was no demand at the present time and stating that considerable stocks from the past year were on hand. The demand was strong for sardines. There are practically no unsold stocks of mussa and brisling sardines and with the increasing demand prices are firm and advancing.

#### Labeling Regulations Hamper Spanish Fish Canners

That Spanish exporters are encountering difficulty in meeting the requirements of some foreign countries with respect to labeling is shown by a report by the American consul at Vigo to the Foodstuffs Division of the Bureau of Foreign and Domestic Commerce. The consul states:

"The Association of Fish Packers has petitioned the Central Government for a diplomatic intervention with the governments of several foreign countries to permit the importation of Spanish fish in tins bearing labels either in Spanish, French, or English. The policy followed by some governments in demanding that the containers be labeled in the language of the importing country is causing much trouble to the packers, since such goods must be packed to order and cannot be shipped from warehouse stocks."

#### Japanese Regulations on Preservatives

The Foodstuffs Division of the Bureau of Foreign and Domestic Commerce has received from its representative in Tokyo details of the new Japan regulations governing the use of preservatives in foods and drinks. The regulations list certain chemicals and bleaching agents and their compounds the use of which is forbidden, and prescribe the amount of sulphur dioxide and benzoate of soda that may be used in foods and drinks. Provision is made in the regulations that if either of these chemicals is used as a preservative, the name of the chemical and the quantity must be marked on the package or label. Detailed information with regard to the regulations may be obtained from the Foodstuffs Division.



### Favorable Conditions for Hawaiian Pineapple

The pineapple pack in Hawaii has surpassed the average yield and the quality of the fruit is excellent, according to a report received by the Department of Commerce from the Honolulu Chamber of Commerce. It is estimated that there will be a moderate increase in final pack figures. There has been a rapid increase in production on Lani and Molokia Islands, from which the ripe fruit is shipped to the Honolulu canneries, in ocean scows towed by tugs. The pack deliveries have been about 600 carloads daily.

### Pineapple Canning Planned in Mauritius

About \$45,000 has been accumulated in Mauritius for building and equipping a pineapple plant, according to a report from the American Vice-Consul at Port Louis. It is believed that about 150 acres of pineapples will begin bearing for the season beginning December, 1928.

### CANNED FOODS IN THE DAILY DIET

*An article in the Health Bulletin of the North Carolina State Board of Health, by E. V. McCollum, Ph.D., Sc.D., Professor of Biochemistry, School of Hygiene and Public Health, Johns Hopkins University.*

During the last twenty years a remarkable advance has been made in our knowledge of quality in foods, and of the nutritive needs of the body. We know in terms of chemical substances what constitutes an adequate diet. We know, in the case of nearly all of our more common and important foods, and with a fair degree of accuracy, which nutrient principles are abundant or deficient in each. It has been found, as our studies have progressed, that most of our ordinary foods which constitute the staple articles of our diet are one-sided in composition. One will contain an excess of certain essential food elements, and lack a sufficient amount of others. It has become evident that we must not condemn any foodstuff because it is not in itself a complete food. If two foods, or several foods, each lacking in one or more indispensable food elements are combined in the proper proportions, one may furnish what another lacks, and so the mixture may be an excellent diet.

### FOODS MUST BE VARIED

All this is by way of saying that a diet restricted to a few articles, and monotonous in character, is likely to be unsatisfactory for the maintenance of health. The keynote to successful nutrition is the proper combination of foods. There are many illustrations in human nutrition of people suffering from ill health as a result of subsisting during the winter

months on a diet of poor quality. Such an experience was common a generation or two ago when the middle west was being settled. Ready money was very scarce and the great objective of the farmers on their new homesteads was to produce crops which could be sold so that farm equipment, fences and buildings could be purchased. Often they subsisted during the winter season principally on refined wheat flour bread, molasses, and fat pork. Those were the times when everyone felt ill in the spring. People thought their blood became impure during the winter season and that they needed blood purifiers and other spring medicines. They took the patent medicines offered them by numerous quacks, but at the same time as spring advanced they began to eat a better diet, for wild herbs were gathered for "greens," the hens began to lay eggs and the half starved cows, when they began to get green grass, produced milk. The better food supply was sufficient to make everyone feel better, but credit was always given to the medicine which had been swallowed, and so, year after year the same practice was repeated. What these pioneers needed was a more varied and better food supply during the winter months.

#### SCIENCE COMES TO THE RESCUE

Science has come to the assistance of mankind in providing ways by which foods may be preserved for months or even years, thus making it possible for people to have a greater variety in the diet the whole year through. Canning, dehydration and cold storage are the principal means by which foods are preserved during the season of excess production, to be used mainly during the part of the year when otherwise we should be reduced to a simple and monotonous diet. A long list of fruits and green vegetables are most effectively preserved in a wholesome and attractive form, and for an almost indefinite period if necessary, through the process of canning. Several kinds of fish and meats, milk, etc., are also best put up in this form. No other method serves so well to conserve the delicate flavors of fruits and vegetables as does canning by modern processes.

In the early history of the canning industry, before methods were fully understood, there was considerable loss due to inadequate processes. Some canners used preservatives so that inferior products could be packed without danger of financial loss. Canned foods came to be looked upon with suspicion by many. That day is now past. There is no industry with which we are familiar which has been more alert in the study of the science underlying the packing of foods in airtight containers, so as to send to the consumer products of the highest quality than has the canning industry. The National Canners Association has invested large sums in research in some of the greatest universities, and it has for years maintained a research laboratory which has been conducted on the highest ethical principles.

#### A CLEAN BILL OF HEALTH

Canned foods are safe to eat. There was a time when there was a tendency to incriminate canned foods if possible whenever anyone suffered from food poisoning. Today one rarely hears such an accusation, for it is

now known that, in general, food poisoning is the result of improper handling of meats and a few other foods in the home or by the persons who handle these foods before they reach the home. During the last twenty years close attention has been given by health officials to tracing out the sources of food poisoning, and as a result of these studies canned foods have received a remarkably clean bill of health. Canned foods are, generally speaking, the safest foods which come to our tables today, except the kinds of vegetables which are thoroughly cooked.

In recent years there has been much interest shown in the effect of the processes of canning on the destruction of vitamins. The earlier studies in the vitamin field showed clearly that vitamin C, the antiscorbutic principle, is not found in dry foods such as the grains, dried fruits and vegetables, or in most foods which have been heated to the boiling point of water or even less. Even the pasteurization of milk, a process so necessary to safeguard health, destroys most of the vitamin C which it contains, although the heating is only carried to 143-145 degrees Fahrenheit. Cooking of fruits and vegetables, meats, etc., in the ordinary kitchen practice is known to destroy in great measure the scurvy-preventing properties of these foods. The natural inference was that canned foods would also be found to have lost this vitamin. Recent researches by Kohman and Eddy have brought to light some very interesting facts about the nutritive values of several canned foods. They have shown that there are certain features about the canning processes which make them far less destructive of vitamin C than ordinary cooking.

#### THAT IMPORTANT VITAMIN C

The major factor in destruction of vitamin C during cooking is oxidation. It has been shown that in canning, after a certain amount of preliminary destruction, subsequent heating has very little effect in the way of further destruction. In the canning of tomatoes, Kohman and Eddy found no destruction of vitamin C, or at least of too small magnitude to be demonstrated by animal experiments. With apples and peaches it was shown that after a preliminary treatment of the fruit in which it was immersed in water until after the respiration processes had used up the oxygen dissolved in the juices, canning could proceed with no demonstrable loss of vitamin C. Lemon juice has been concentrated and heated to as high a temperature as is employed in processing canned foods during several hours, without destroying any demonstrable amount of the vitamin.

In commercial canning it is customary to place the cans filled with fruit and syrup, in an exhaust box, and to generally warm them to a temperature at which the oxidizing ferments cease to function. As the fruits are warmed, the rate at which oxygen is used up in tissue respiration is greatly accelerated, and the dissolved oxygen is quickly used up. It has been demonstrated that after this point is reached the canning process can be carried out without further destruction of the antiscorbutic vitamin C.

The vitamin C content of commercially canned fruits and vegetables appears, therefore, to be much greater than that of fresh foods which are cooked in the usual manner, viz., by promptly heating to cooking tempera-

ture without preliminary treatment which would cause the disappearance of dissolved oxygen in their substance. By ordinary cooking this vitamin is essentially all destroyed, yet by the special treatment previous to strong heat treatment the destruction may be avoided.

What we have said regarding ordinary cooking of foods probably also applies to foods which are home canned, although no studies have as yet been conducted which would show the extent to which vitamin C is destroyed in home canning. The heat is in general probably applied too rapidly to permit of saving the vitamin from destruction.

#### RESULTS OF NUTRITIONAL RESEARCH

Canned foods have steadily grown in favor with the consuming public for many years, mainly because of the excellence of the state of preservation and the attractiveness of their flavors and appearance. In no branch of the food industry has the results of scientific investigation been more effectively applied than in the canning industry. This is the reason why canned foods are as safe as any foods we eat, and safer than a number of common foods which are purchased fresh but are handled in the home in a manner which makes it possible that illness may arise from eating them when stale. Now comes the scientific investigator who shows us the fallacy of hasty reasoning from the analogy with ordinary cooked foods, which have lost through destruction, most or all of their vitamin C, to the conclusion that canned foods, heated even more thoroughly, have also lost their vitamin C content. There are special features in the canning process which preserves a nutrient principle which ordinary cooking destroys.

As for the other vitamins in canned foods, it may be said with confidence from data available, that these are not destroyed in canning to an appreciable extent. The high favor of canned foods among consumers everywhere is justified by the results of nutritional research.

#### Publication of Interest to Cannors

*Apple trees.*—The Agricultural Experiment Station at State College, Pa., has issued as bulletin No. 224, a 27-page illustrated report on training and pruning apples trees.